

Economic Growth Case Comparisons

Table B1. Total Energy Supply and Disposition Summary
(Quadrillion Btu per Year, Unless Otherwise Noted)

Supply, Disposition, and Prices	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Production										
Crude Oil and Lease Condensate	11.47	12.44	12.45	12.46	11.66	11.75	11.73	9.61	9.68	9.73
Natural Gas Plant Liquids	2.46	2.35	2.39	2.42	2.61	2.67	2.71	2.50	2.57	2.64
Dry Natural Gas	19.02	18.79	19.13	19.48	21.51	22.09	22.64	20.75	21.45	22.15
Coal	22.86	25.27	25.78	26.09	25.70	27.30	29.07	29.78	34.10	38.77
Nuclear Power	8.23	8.44	8.44	8.44	8.93	9.09	9.09	8.94	9.09	9.09
Renewable Energy ¹	5.74	6.98	7.08	7.15	7.55	8.00	8.42	8.34	9.02	9.83
Other ²	0.64	2.12	2.16	2.20	3.06	3.16	3.26	3.23	3.44	3.69
Total	70.42	76.39	77.42	78.23	81.03	84.05	86.91	83.15	89.36	95.89
Imports										
Crude Oil ³	22.02	21.93	22.01	22.81	23.07	24.63	26.72	26.25	29.54	32.70
Petroleum Products ⁴	5.93	5.29	6.36	6.82	6.97	8.01	8.95	7.58	9.27	11.08
Natural Gas	4.36	4.75	5.01	5.30	4.96	5.83	6.27	6.07	6.72	7.49
Other Imports ⁵	0.83	0.44	0.45	0.45	1.24	1.36	1.57	2.08	2.42	2.58
Total	33.14	32.41	33.83	35.38	36.24	39.83	43.50	41.97	47.95	53.84
Exports										
Petroleum ⁶	2.07	2.11	2.15	2.19	2.15	2.24	2.32	2.19	2.31	2.44
Natural Gas	0.86	0.56	0.55	0.55	0.71	0.68	0.65	1.08	1.01	0.92
Coal	1.25	1.03	1.03	1.03	0.47	0.46	0.46	0.39	0.40	0.40
Total	4.18	3.71	3.74	3.77	3.33	3.39	3.43	3.66	3.72	3.77
Discrepancy ⁷	-0.31	-0.33	-0.36	-0.36	-0.06	-0.15	-0.27	-0.08	-0.30	-0.42
Consumption										
Petroleum Products ⁸	40.08	41.93	43.14	44.45	45.11	48.14	51.46	47.89	53.58	59.33
Natural Gas	23.07	23.43	24.04	24.68	26.22	27.70	28.73	26.20	27.66	29.23
Coal	22.53	24.58	25.09	25.40	26.13	27.65	29.50	30.13	34.49	38.86
Nuclear Power	8.23	8.44	8.44	8.44	8.93	9.09	9.09	8.94	9.09	9.09
Renewable Energy ¹	5.74	6.98	7.08	7.15	7.55	8.00	8.42	8.34	9.02	9.83
Other ⁹	0.04	0.07	0.07	0.08	0.05	0.05	0.05	0.04	0.05	0.05
Total	99.68	105.42	107.87	110.19	114.00	120.63	127.25	121.54	133.88	146.39
Net Imports - Petroleum	25.88	25.11	26.22	27.43	27.89	30.39	33.34	31.64	36.49	41.34
Prices (2004 dollars per unit)										
Imported Low Sulfur Light Crude Oil Price (dollars per barrel) ¹⁰	40.49	47.29	47.29	47.29	50.70	50.70	50.78	56.97	56.97	56.97
Imported Crude Oil Price (dollars per barrel) ¹⁰	35.99	43.99	43.99	43.99	44.99	44.99	44.99	49.99	49.99	49.99
Natural Gas Wellhead Price (dollars per thousand cubic feet) ¹¹	5.49	4.87	5.03	5.20	4.76	4.90	5.10	5.61	5.92	6.22
Coal Minemouth Price (dollars per ton)	20.07	21.79	22.23	22.02	19.60	20.20	20.85	19.96	21.73	23.05
Average Electricity Price (cents per kilowatthour)	7.6	7.2	7.3	7.4	7.0	7.2	7.5	7.2	7.5	7.8

¹Includes grid-connected electricity from conventional hydroelectric; wood and wood waste; landfill gas; municipal solid waste; other biomass; wind; photovoltaic and solar thermal sources; non-electric energy from renewable sources, such as active and passive solar systems, and wood; and both the ethanol and gasoline components of E85, but not the ethanol components of blends less than 85 percent. Excludes electricity imports using renewable sources and nonmarketed renewable energy.

²Includes liquid hydrogen, methanol, supplemental natural gas, and some domestic inputs to refineries.

³Includes imports of crude oil for the Strategic Petroleum Reserve.

⁴Includes imports of finished petroleum products, unfinished oils, alcohols, ethers, and blending components.

⁵Includes coal, coal coke (net), and electricity (net).

⁶Includes crude oil and petroleum products.

⁷Balancing item. Includes unaccounted for supply, losses, gains, net storage withdrawals, heat loss when natural gas is converted to liquid fuel, and heat loss when coal is converted to liquid fuel.

⁸Includes natural gas plant liquids, crude oil consumed as a fuel, and nonpetroleum-based liquids for blending, such as ethanol.

⁹Includes net electricity imports, methanol, and liquid hydrogen.

¹⁰Weighted average price delivered to U.S. refiners. Crude oil prices were held constant in alternative economic growth cases.

¹¹Represents lower 48 onshore and offshore supplies.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2004 are model results and may differ slightly from official EIA data reports.

Sources: 2004 natural gas supply values and natural gas wellhead price: Energy Information Administration (EIA), *Natural Gas Monthly*, DOE/EIA-0130(2005/06) (Washington, DC, June 2005), subtracting 1 billion cubic feet per day to account for carbon dioxide included in production in Texas. 2004 petroleum supply values: EIA, *Petroleum Supply Annual 2004*, DOE/EIA-0340(2004)/1 (Washington, DC, June 2005). 2004 imported low sulfur light crude oil price: EIA, Form EIA-856, "Monthly Foreign Crude Oil Acquisition Report." Other 2004 coal values: *Quarterly Coal Report, October-December 2004*, DOE/EIA-0121(2004/4Q) (Washington, DC, March 2005). Other 2004 values: EIA, *Annual Energy Review 2004*, DOE/EIA-0384(2004) (Washington, DC, August 2005). Projections: EIA, AEO2006 National Energy Modeling System runs LM2006.D113005A, AEO2006.D111905A, and HM2006.D112505B.

Economic Growth Case Comparisons

Table B2. Energy Consumption by Sector and Source
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Energy Consumption										
Residential										
Distillate Fuel	0.94	0.84	0.84	0.84	0.73	0.73	0.74	0.60	0.61	0.62
Kerosene	0.09	0.09	0.09	0.09	0.08	0.08	0.08	0.07	0.07	0.07
Liquefied Petroleum Gas	0.54	0.55	0.56	0.56	0.60	0.61	0.63	0.61	0.65	0.68
Petroleum Subtotal	1.57	1.48	1.48	1.49	1.41	1.43	1.45	1.28	1.32	1.36
Natural Gas	5.03	5.29	5.33	5.37	5.49	5.68	5.87	5.45	5.82	6.19
Coal	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01	0.01
Renewable Energy ¹	0.41	0.43	0.44	0.44	0.42	0.43	0.44	0.40	0.41	0.43
Electricity	4.41	4.94	4.99	5.04	5.55	5.77	5.99	6.00	6.47	6.95
Delivered Energy	11.44	12.16	12.25	12.34	12.88	13.31	13.75	13.13	14.04	14.94
Electricity Related Losses	9.60	10.62	10.74	10.79	11.55	11.85	12.15	12.03	12.60	13.15
Total	21.04	22.78	22.99	23.14	24.43	25.17	25.90	25.16	26.64	28.08
Commercial										
Distillate Fuel	0.50	0.48	0.48	0.48	0.49	0.50	0.51	0.49	0.52	0.54
Residual Fuel	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.12	0.13
Kerosene	0.02	0.02	0.02	0.02	0.02	0.02	0.03	0.02	0.03	0.03
Liquefied Petroleum Gas	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Motor Gasoline ²	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05	0.05
Petroleum Subtotal	0.79	0.77	0.77	0.77	0.78	0.79	0.81	0.78	0.82	0.85
Natural Gas	3.09	3.17	3.18	3.19	3.54	3.68	3.83	3.76	4.11	4.46
Coal	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Renewable Energy ³	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09	0.09
Electricity	4.19	4.86	4.88	4.90	5.77	6.01	6.22	6.71	7.34	7.96
Delivered Energy	8.24	8.97	9.00	9.03	10.26	10.66	11.03	11.42	12.44	13.45
Electricity Related Losses	9.13	10.46	10.51	10.50	12.00	12.35	12.63	13.45	14.29	15.07
Total	17.37	19.43	19.51	19.53	22.26	23.02	23.67	24.88	26.73	28.51
Industrial ⁴										
Distillate Fuel	1.19	1.13	1.20	1.27	1.11	1.23	1.35	1.15	1.32	1.50
Liquefied Petroleum Gas	2.19	2.07	2.21	2.35	2.06	2.34	2.64	2.10	2.54	2.97
Petrochemical Feedstock	1.49	1.38	1.48	1.57	1.32	1.51	1.72	1.27	1.55	1.87
Residual Fuel	0.24	0.19	0.20	0.21	0.19	0.20	0.21	0.19	0.21	0.23
Motor Gasoline ²	0.32	0.31	0.32	0.34	0.30	0.32	0.35	0.30	0.34	0.37
Other Petroleum ⁵	4.16	4.41	4.60	4.83	4.60	5.05	5.66	4.85	5.69	6.54
Petroleum Subtotal	9.58	9.49	10.01	10.57	9.57	10.65	11.93	9.85	11.66	13.49
Natural Gas	7.64	7.80	8.07	8.32	7.89	8.52	9.06	8.11	9.08	10.09
Lease and Plant Fuel ⁶	1.14	1.10	1.12	1.13	1.26	1.28	1.31	1.17	1.21	1.24
Natural Gas Subtotal	8.78	8.90	9.19	9.45	9.15	9.80	10.36	9.29	10.29	11.33
Metallurgical Coal	0.65	0.60	0.62	0.64	0.55	0.59	0.64	0.51	0.58	0.64
Other Industrial Coal	1.38	1.41	1.43	1.45	1.39	1.43	1.47	1.38	1.45	1.52
Coal-to-Liquids Heat and Power	0.00	0.00	0.00	0.00	0.26	0.49	0.62	1.28	1.61	2.07
Net Coal Coke Imports	0.14	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.02
Coal Subtotal	2.16	2.02	2.07	2.12	2.21	2.53	2.74	3.18	3.65	4.25
Renewable Energy ⁷	1.68	1.73	1.79	1.86	1.86	2.01	2.17	1.99	2.29	2.60
Electricity	3.48	3.45	3.62	3.79	3.55	3.91	4.29	3.66	4.31	4.96
Delivered Energy	25.68	25.59	26.67	27.78	26.34	28.91	31.51	27.97	32.19	36.63
Electricity Related Losses	7.58	7.42	7.79	8.11	7.39	8.04	8.71	7.34	8.39	9.38
Total	33.27	33.02	34.46	35.89	33.73	36.95	40.22	35.31	40.58	46.01

Economic Growth Case Comparisons

Table B2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Transportation										
Distillate Fuel ⁸	5.91	6.53	6.82	7.14	7.41	8.13	8.89	8.67	9.98	11.38
Jet Fuel ⁹	3.35	3.82	3.89	3.97	4.35	4.53	4.70	4.36	4.79	5.26
Motor Gasoline ²	16.93	18.03	18.33	18.65	19.77	20.73	21.71	21.08	22.99	24.88
Residual Fuel	0.61	0.62	0.62	0.63	0.63	0.64	0.65	0.64	0.65	0.67
Liquefied Petroleum Gas	0.03	0.06	0.06	0.06	0.08	0.09	0.09	0.10	0.11	0.11
Other Petroleum ¹⁰	0.18	0.18	0.18	0.18	0.18	0.18	0.19	0.18	0.19	0.20
Petroleum Subtotal	27.02	29.23	29.91	30.63	32.43	34.30	36.22	35.03	38.71	42.50
Pipeline Fuel Natural Gas	0.69	0.64	0.65	0.66	0.77	0.80	0.82	0.75	0.78	0.81
Compressed Natural Gas	0.03	0.05	0.05	0.06	0.09	0.09	0.10	0.10	0.12	0.13
Renewable Energy (E85) ¹¹	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01	0.01
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	0.08	0.09	0.09	0.09	0.10	0.10	0.10	0.10	0.11	0.11
Delivered Energy	27.82	30.01	30.70	31.44	33.39	35.30	37.25	35.99	39.72	43.56
Electricity Related Losses	0.18	0.19	0.19	0.19	0.20	0.20	0.21	0.21	0.21	0.21
Total	28.00	30.20	30.90	31.64	33.59	35.50	37.46	36.19	39.93	43.78
Delivered Energy Consumption for All Sectors										
Distillate Fuel	8.55	8.98	9.34	9.73	9.74	10.59	11.49	10.90	12.43	14.04
Kerosene	0.13	0.14	0.14	0.14	0.13	0.13	0.13	0.11	0.11	0.12
Jet Fuel ⁹	3.35	3.82	3.89	3.97	4.35	4.53	4.70	4.36	4.79	5.26
Liquefied Petroleum Gas	2.85	2.78	2.92	3.07	2.84	3.14	3.47	2.91	3.40	3.87
Motor Gasoline ²	17.30	18.39	18.70	19.03	20.12	21.10	22.10	21.43	23.38	25.30
Petrochemical Feedstock	1.49	1.38	1.48	1.57	1.32	1.51	1.72	1.27	1.55	1.87
Residual Fuel	0.97	0.93	0.94	0.96	0.94	0.96	0.98	0.95	0.99	1.03
Other Petroleum ¹²	4.32	4.56	4.75	4.99	4.76	5.21	5.83	5.01	5.86	6.71
Petroleum Subtotal	38.96	40.97	42.17	43.46	44.19	47.17	50.41	46.93	52.51	58.19
Natural Gas	15.79	16.32	16.63	16.93	17.01	17.97	18.85	17.42	19.13	20.87
Lease and Plant Fuel Plant ⁶	1.14	1.10	1.12	1.13	1.26	1.28	1.31	1.17	1.21	1.24
Pipeline Natural Gas	0.69	0.64	0.65	0.66	0.77	0.80	0.82	0.75	0.78	0.81
Natural Gas Subtotal	17.62	18.06	18.40	18.72	19.03	20.06	20.98	19.34	21.11	22.93
Metallurgical Coal	0.65	0.60	0.62	0.64	0.55	0.59	0.64	0.51	0.58	0.64
Other Coal	1.47	1.50	1.53	1.55	1.48	1.53	1.57	1.47	1.54	1.61
Coal-to-Liquids Heat and Power	0.00	0.00	0.00	0.00	0.26	0.49	0.62	1.28	1.61	2.07
Net Coal Coke Imports	0.14	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.02
Coal Subtotal	2.26	2.12	2.17	2.21	2.30	2.63	2.84	3.28	3.74	4.35
Renewable Energy ¹³	2.17	2.25	2.32	2.39	2.37	2.53	2.70	2.49	2.80	3.13
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity	12.17	13.33	13.57	13.82	14.96	15.79	16.60	16.47	18.22	19.97
Delivered Energy	73.18	76.73	78.62	80.60	82.86	88.19	93.55	88.52	98.40	108.57
Electricity Related Losses	26.50	28.69	29.24	29.60	31.14	32.45	33.70	33.02	35.48	37.81
Total	99.68	105.42	107.87	110.19	114.00	120.63	127.25	121.54	133.88	146.39
Electric Power ¹⁴										
Distillate Fuel	0.17	0.23	0.23	0.24	0.23	0.24	0.26	0.25	0.27	0.30
Residual Fuel	0.95	0.73	0.74	0.75	0.69	0.73	0.79	0.71	0.80	0.84
Petroleum Subtotal	1.12	0.96	0.97	0.99	0.91	0.97	1.05	0.96	1.07	1.14
Natural Gas	5.45	5.37	5.65	5.96	7.19	7.65	7.74	6.85	6.54	6.30
Steam Coal	20.26	22.46	22.92	23.18	23.83	25.02	26.66	26.85	30.74	34.51
Nuclear Power	8.23	8.44	8.44	8.44	8.93	9.09	9.09	8.94	9.09	9.09
Renewable Energy ¹⁵	3.57	4.73	4.76	4.76	5.19	5.47	5.72	5.85	6.22	6.70
Electricity Imports	0.04	0.07	0.07	0.08	0.05	0.05	0.05	0.04	0.05	0.05
Total	38.67	42.03	42.82	43.41	46.10	48.24	50.31	49.50	53.71	57.79

Economic Growth Case Comparisons

Table B2. Energy Consumption by Sector and Source (Continued)
(Quadrillion Btu per Year, Unless Otherwise Noted)

Sector and Source	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Total Energy Consumption										
Distillate Fuel	8.72	9.21	9.57	9.97	9.96	10.83	11.75	11.15	12.70	14.34
Kerosene	0.13	0.14	0.14	0.14	0.13	0.13	0.13	0.11	0.11	0.12
Jet Fuel ⁹	3.35	3.82	3.89	3.97	4.35	4.53	4.70	4.36	4.79	5.26
Liquefied Petroleum Gas	2.85	2.78	2.92	3.07	2.84	3.14	3.47	2.91	3.40	3.87
Motor Gasoline ²	17.30	18.39	18.70	19.03	20.12	21.10	22.10	21.43	23.38	25.30
Petrochemical Feedstock	1.49	1.38	1.48	1.57	1.32	1.51	1.72	1.27	1.55	1.87
Residual Fuel	1.91	1.66	1.68	1.70	1.63	1.69	1.77	1.66	1.79	1.86
Other Petroleum ¹²	4.32	4.56	4.75	4.99	4.76	5.21	5.83	5.01	5.86	6.71
Petroleum Subtotal	40.08	41.93	43.14	44.45	45.11	48.14	51.46	47.89	53.58	59.33
Natural Gas	21.24	21.69	22.28	22.89	24.19	25.62	26.60	24.28	25.67	27.18
Lease and Plant Fuel ⁶	1.14	1.10	1.12	1.13	1.26	1.28	1.31	1.17	1.21	1.24
Pipeline Natural Gas	0.69	0.64	0.65	0.66	0.77	0.80	0.82	0.75	0.78	0.81
Natural Gas Subtotal	23.07	23.43	24.04	24.68	26.22	27.70	28.73	26.20	27.66	29.23
Metallurgical Coal	0.65	0.60	0.62	0.64	0.55	0.59	0.64	0.51	0.58	0.64
Other Coal	21.74	23.97	24.45	24.74	25.31	26.55	28.23	28.32	32.29	36.13
Coal-to-Liquids Heat and Power	0.00	0.00	0.00	0.00	0.26	0.49	0.62	1.28	1.61	2.07
Net Coal Coke Imports	0.14	0.02	0.02	0.02	0.01	0.02	0.02	0.01	0.02	0.02
Coal Subtotal	22.53	24.58	25.09	25.40	26.13	27.65	29.50	30.13	34.49	38.86
Nuclear Power	8.23	8.44	8.44	8.44	8.93	9.09	9.09	8.94	9.09	9.09
Renewable Energy ¹⁶	5.74	6.98	7.08	7.15	7.55	8.00	8.42	8.34	9.02	9.83
Liquid Hydrogen	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
Electricity Imports	0.04	0.07	0.07	0.08	0.05	0.05	0.05	0.04	0.05	0.05
Total	99.68	105.42	107.87	110.19	114.00	120.63	127.25	121.54	133.88	146.39
Energy Use and Related Statistics										
Delivered Energy Use	73.18	76.73	78.62	80.60	82.86	88.19	93.55	88.52	98.40	108.57
Total Energy Use	99.68	105.42	107.87	110.19	114.00	120.63	127.25	121.54	133.88	146.39
Population (millions)	294.10	307.61	310.12	312.62	322.74	336.99	351.24	334.11	364.79	395.48
Gross Domestic Product (billion 2000 dollars) .	10756	12529	13043	13561	16022	17541	19073	19771	23112	26471
Carbon Dioxide Emissions (million metric tons)	5899.9	6219.0	6364.9	6501.9	6720.4	7119.0	7542.4	7283.7	8114.5	8956.8

¹Includes wood used for residential heating.

²Includes ethanol (blends of 10 percent or less) and ethers blended into gasoline.

³Includes commercial sector consumption of wood and wood waste, landfill gas, municipal solid waste, and other biomass for combined heat and power.

⁴Includes energy for combined heat and power plants, except those whose primary business is to sell electricity, or electricity and heat, to the public.

⁵Includes petroleum coke, asphalt, road oil, lubricants, still gas, and miscellaneous petroleum products.

⁶Represents natural gas used in the field gathering and processing plant machinery.

⁷Includes consumption of energy from hydroelectric, wood and wood waste, municipal solid waste, and other biomass.

⁸Diesel fuel for on- and off- road use.

⁹Includes only kerosene type.

¹⁰Includes aviation gasoline and lubricants.

¹¹E85 refers to a blend of 85 percent ethanol (renewable) and 15 percent motor gasoline (nonrenewable). To address cold starting issues, the percentage of ethanol actually varies seasonally. The annual average ethanol content of 74 percent is used for this forecast.

¹²Includes unfinished oils, natural gasoline, motor gasoline blending components, aviation gasoline, lubricants, still gas, asphalt, road oil, petroleum coke, and miscellaneous petroleum products.

¹³Includes electricity generated for sale to the grid and for own use from renewable sources, and non-electric energy from renewable sources. Excludes nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

¹⁴Includes consumption of energy by electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public. Includes small power producers and exempt wholesale generators.

¹⁵Includes conventional hydroelectric, geothermal, wood and wood waste, municipal solid waste, other biomass, petroleum coke, wind, photovoltaic and solar thermal sources. Excludes net electricity imports.

¹⁶Includes hydroelectric, geothermal, wood and wood waste, municipal solid waste, other biomass, wind, photovoltaic and solar thermal sources. Includes ethanol components of E85; excludes ethanol blends (10 percent or less) in motor gasoline. Excludes net electricity imports and nonmarketed renewable energy consumption for geothermal heat pumps, buildings photovoltaic systems, and solar thermal hot water heaters.

Btu = British thermal unit.

Note: Totals may not equal sum of components due to independent rounding. Data for 2004 are model results and may differ slightly from official EIA data reports. Consumption values of 0.00 are values that round to 0.00, because they are less than 0.005.

Sources: 2004 consumption based on: Energy Information Administration (EIA), *Annual Energy Review 2004*, DOE/EIA-0384(2004) (Washington, DC, August 2005). 2004 population and gross domestic product: Global Insight macroeconomic model CTL0805. 2004 carbon dioxide emissions: EIA, *Emissions of Greenhouse Gases in the United States 2004*, DOE/EIA-0573(2004) (Washington, DC, December 2005). Projections: EIA, AEO2006 National Energy Modeling System runs LM2006.D113005A, AEO2006.D111905A, and HM2006.D112505B.

Economic Growth Case Comparisons

Table B3. Energy Prices by Sector and Source
(2004 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Residential	17.31	16.65	16.98	17.25	16.69	17.19	17.74	17.85	18.51	19.19
Primary Energy ¹	11.39	11.05	11.28	11.46	11.06	11.31	11.58	12.26	12.62	13.01
Petroleum Products ²	14.63	14.27	14.77	14.95	15.36	15.94	16.39	17.92	18.42	19.15
Distillate Fuel	13.62	12.39	12.85	12.88	13.46	13.55	13.63	14.56	14.56	14.66
Liquefied Petroleum Gas	17.30	17.62	18.17	18.59	18.15	19.34	20.23	21.79	22.68	23.92
Natural Gas	10.40	10.17	10.33	10.51	9.98	10.16	10.41	10.95	11.32	11.68
Electricity	26.19	24.36	24.78	25.15	23.69	24.44	25.26	24.12	25.02	25.92
Commercial	16.56	15.87	16.27	16.60	15.75	16.28	16.87	16.74	17.52	18.35
Primary Energy ¹	9.20	8.79	8.96	9.11	8.59	8.74	8.94	9.41	9.65	9.94
Petroleum Products ²	10.39	10.30	10.56	10.63	10.99	11.22	11.37	12.17	12.28	12.66
Distillate Fuel	9.99	9.85	10.15	10.18	10.75	10.89	10.99	11.75	11.77	12.12
Residual Fuel	6.37	6.13	6.14	6.14	6.29	6.31	6.29	6.89	6.91	6.96
Natural Gas	9.10	8.61	8.76	8.93	8.22	8.37	8.58	9.01	9.29	9.57
Electricity	23.52	21.74	22.31	22.78	21.22	22.00	22.90	21.80	22.90	24.06
Industrial³	8.67	8.23	8.48	8.67	8.18	8.48	8.85	8.84	9.27	9.85
Primary Energy	7.42	6.99	7.19	7.33	7.01	7.24	7.54	7.75	8.09	8.62
Petroleum Products ²	9.65	9.24	9.46	9.55	9.58	9.94	10.26	11.01	11.36	12.21
Distillate Fuel	10.29	10.44	10.75	10.79	11.66	11.84	11.97	12.92	12.91	13.39
Liquefied Petroleum Gas	14.24	11.70	12.03	12.30	11.87	12.92	13.67	14.38	15.25	16.42
Residual Fuel	5.88	6.30	6.31	6.35	6.61	6.70	6.59	7.16	7.27	7.51
Natural Gas ⁴	6.10	5.53	5.69	5.85	5.35	5.49	5.70	6.17	6.45	6.72
Metallurgical Coal ⁵	2.24	2.34	2.36	2.37	2.19	2.23	2.27	2.22	2.28	2.34
Other Industrial Coal ⁵	1.74	1.84	1.86	1.87	1.76	1.81	1.86	1.82	1.92	2.00
Coal to Liquids	N/A	N/A	N/A	N/A	0.86	1.04	1.11	1.23	1.26	1.32
Electricity	15.54	15.17	15.65	16.08	14.69	15.35	16.05	15.15	15.95	16.77
Transportation	13.81	14.56	14.83	14.92	15.10	15.38	15.52	16.17	16.32	16.79
Primary Energy	13.79	14.54	14.82	14.90	15.08	15.36	15.51	16.16	16.31	16.78
Petroleum Products ²	13.79	14.55	14.82	14.91	15.10	15.38	15.52	16.17	16.32	16.80
Distillate Fuel ⁶	13.25	13.98	14.29	14.36	14.49	14.78	15.06	15.52	15.65	16.38
Jet Fuel ⁷	9.02	9.35	9.67	9.71	10.25	10.49	10.69	11.24	11.53	11.94
Motor Gasoline ⁸	15.34	16.26	16.52	16.62	16.73	17.02	17.09	17.78	17.92	18.32
Residual Fuel	4.91	6.31	6.43	6.45	6.56	6.54	6.62	7.45	7.59	7.68
Liquefied Petroleum Gas ⁹	17.14	16.19	16.72	17.03	15.83	16.82	17.96	18.37	19.25	20.48
Natural Gas ¹⁰	9.94	9.91	10.09	10.26	9.68	9.90	10.19	10.31	10.68	11.06
Ethanol (E85) ¹¹	20.24	20.90	21.19	21.37	20.67	21.10	21.52	21.99	22.48	23.00
Electricity	21.67	20.30	20.76	21.15	19.84	20.56	21.33	20.12	21.00	21.79
Average End-Use Energy	13.00	13.08	13.32	13.45	13.39	13.66	13.91	14.34	14.64	15.13
Primary Energy	11.04	11.30	11.52	11.61	11.69	11.89	12.06	12.68	12.86	13.27
Electricity	22.19	21.00	21.43	21.80	20.58	21.23	21.97	21.16	22.00	22.88
Electric Power¹²										
Fossil Fuel Average	2.46	2.34	2.41	2.48	2.39	2.46	2.51	2.49	2.49	2.52
Petroleum Products	5.43	6.41	6.50	6.53	6.90	6.91	6.89	7.67	7.61	7.77
Distillate Fuel	9.23	8.75	9.04	9.07	9.52	9.62	9.66	10.24	10.28	10.43
Residual Fuel	4.76	5.67	5.70	5.71	6.05	6.02	5.97	6.76	6.73	6.82
Natural Gas	5.92	5.28	5.46	5.67	5.24	5.40	5.60	5.98	6.26	6.55
Steam Coal ⁵	1.36	1.46	1.48	1.48	1.36	1.39	1.44	1.41	1.51	1.61

Economic Growth Case Comparisons

Table B3. Energy Prices by Sector and Source (Continued)
(2004 Dollars per Million Btu, Unless Otherwise Noted)

Sector and Source	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Average Price to All Users ¹³										
Petroleum Products ²	12.61	13.17	13.41	13.47	13.80	14.05	14.19	15.02	15.16	15.68
Distillate Fuel	12.62	12.96	13.30	13.37	13.81	14.07	14.31	14.93	15.04	15.69
Jet Fuel	9.02	9.35	9.67	9.71	10.25	10.49	10.69	11.24	11.53	11.94
Liquefied Petroleum Gas	14.89	13.07	13.39	13.64	13.41	14.38	15.06	16.20	16.90	17.95
Motor Gasoline ⁸	15.33	16.26	16.52	16.62	16.73	17.02	17.09	17.78	17.92	18.32
Residual Fuel	5.04	6.02	6.07	6.09	6.33	6.31	6.31	7.08	7.12	7.22
Natural Gas	7.52	7.06	7.19	7.34	6.80	6.93	7.14	7.65	7.98	8.30
Metallurgical Coal ⁵	2.24	2.34	2.36	2.37	2.19	2.23	2.27	2.22	2.28	2.34
Other Coal ⁵	1.39	1.48	1.51	1.51	1.39	1.42	1.46	1.43	1.53	1.63
Coal to Liquids	N/A	N/A	N/A	N/A	0.86	1.04	1.11	1.23	1.26	1.32
Ethanol (E85) ¹¹	20.24	20.90	21.19	21.37	20.67	21.10	21.52	21.99	22.48	23.00
Electricity	22.19	21.00	21.43	21.80	20.58	21.23	21.97	21.16	22.00	22.88
Non-Renewable Energy Expenditures by Sector (billion 2004 dollars)										
Residential	190.90	195.27	200.59	205.38	207.93	221.50	236.10	227.28	252.12	278.41
Commercial	135.07	141.03	145.01	148.51	160.17	172.19	184.74	189.81	216.48	245.17
Industrial	170.01	156.56	169.60	182.01	156.14	179.83	205.96	177.33	216.86	264.94
Transportation	374.67	427.60	445.81	459.08	492.36	530.44	565.50	569.70	635.46	717.72
Total Non-Renewable Expenditures	870.65	920.45	961.01	994.97	1016.60	1103.97	1192.30	1164.11	1320.94	1506.24
Transportation Renewable Expenditures	0.02	0.05	0.05	0.05	0.09	0.10	0.10	0.12	0.13	0.15
Total Expenditures	870.67	920.50	961.06	995.03	1016.69	1104.07	1192.40	1164.23	1321.07	1506.39

¹Weighted average price includes fuels below as well as coal.

²This quantity is the weighted average for all petroleum products, not just those listed below.

³Includes energy for combined heat and power plants, except those whose primary business is to sell electricity, or electricity and heat, to the public.

⁴Excludes use for lease and plant fuel.

⁵Excludes imported coal.

⁶Diesel fuel for on-road use. Includes Federal and State taxes while excluding county and local taxes.

⁷Kerosene-type jet fuel. Includes Federal and State taxes while excluding county and local taxes.

⁸Sales weighted-average price for all grades. Includes Federal, State and local taxes.

⁹Includes Federal and State taxes while excluding county and local taxes.

¹⁰Compressed natural gas used as a vehicle fuel. Includes estimated motor vehicle fuel taxes.

¹¹E85 refers to a blend of 85 percent ethanol (renewable) and 15 percent motor gasoline (nonrenewable). To address cold starting issues, the percentage of ethanol actually varies seasonally. The annual average ethanol content of 74 percent is used for this forecast.

¹²Includes electricity-only and combined heat and power plants whose primary business is to sell electricity, or electricity and heat, to the public.

¹³Weighted averages of end-use fuel prices are derived from the prices shown in each sector and the corresponding sectoral consumption.

Btu = British thermal unit.

Note: Data for 2004 are model results and may differ slightly from official EIA data reports.

Sources: 2004 prices for motor gasoline, distillate, and jet fuel are based on prices in the Energy Information Administration (EIA), *Petroleum Marketing Annual 2004*, DOE/EIA-0487(2004) (Washington, DC, August 2005). 2004 residential and commercial natural gas delivered prices: EIA, *Natural Gas Monthly*, DOE/EIA-0130(2005/06) (Washington, DC, June 2005). 2004 industrial natural gas delivered prices are estimated based on: EIA, *Manufacturing Energy Consumption Survey 1994* and industrial and wellhead prices from the *Natural Gas Annual 2003*, DOE/EIA-0131(2003) (Washington, DC, December 2004) and the *Natural Gas Monthly*, DOE/EIA-0130(2005/06) (Washington, DC, June 2005). 2004 transportation sector natural gas delivered prices are model results. 2004 electric power sector natural gas prices: EIA, *Electric Power Monthly*, DOE/EIA-0226, May 2003 through April 2004, Table 4.11.A. 2004 coal prices based on: EIA, *Quarterly Coal Report, October-December 2004*, DOE/EIA-0121(2004/4Q) (Washington, DC, March 2005) and EIA, AEO2006 National Energy Modeling System run AEO2006.D111905A. 2004 electricity prices: EIA, *Annual Energy Review 2004*, DOE/EIA-0384(2004) (Washington, DC, August 2005). 2004 ethanol prices derived from weekly spot prices in the Oxy Fuel News. **Projections:** EIA, AEO2006 National Energy Modeling System runs LM2006.D113005A, AEO2006.D111905A, and HM2006.D112505B.

Economic Growth Case Comparisons

Table B4. Macroeconomic Indicators
(Billion 2000 Chain-Weighted Dollars, Unless Otherwise Noted)

Indicators	2004	Projections								
		2010			2020			2030		
		Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth	Low Economic Growth	Reference	High Economic Growth
Real Gross Domestic Product	10756	12529	13043	13561	16022	17541	19073	19771	23112	26471
Real Potential Gross Domestic Product	11030	13153	13367	13583	15886	17176	18469	19756	22738	25731
Components of Real Gross Domestic Product										
Real Consumption	7589	8831	9128	9429	11016	11916	12826	13416	15352	17306
Real Investment	1810	2033	2259	2487	2858	3293	3730	3960	4985	6001
Real Government Spending	1952	2097	2150	2204	2288	2464	2640	2471	2838	3204
Real Exports	1118	1823	1831	1839	3589	3776	3967	6252	6833	7421
Real Imports	1719	2219	2295	2366	3479	3659	3788	5775	6156	6492
Energy Intensity (thousand Btu per 2000 dollar of GDP)										
Delivered Energy	6.81	6.13	6.03	5.95	5.18	5.03	4.91	4.48	4.26	4.11
Total Energy	9.27	8.42	8.28	8.13	7.12	6.88	6.68	6.15	5.80	5.53
Price Indices										
GDP Chain-Type Price Index (2000=1.000) ...	1.091	1.265	1.235	1.204	1.741	1.597	1.453	2.326	2.048	1.778
Consumer Price Index (1982-4=1)										
All-Urban	1.89	2.21	2.15	2.10	3.12	2.86	2.61	4.29	3.78	3.30
Energy Commodities and Services	1.51	1.68	1.67	1.64	2.34	2.19	2.03	3.31	2.96	2.66
Wholesale Price Index (1982=1.00)										
All Commodities	1.47	1.59	1.55	1.50	2.02	1.82	1.62	2.50	2.13	1.79
Fuel and Power	1.27	1.36	1.36	1.34	1.89	1.77	1.65	2.75	2.49	2.24
Interest Rates (percent, nominal)										
Federal Funds Rate	1.35	5.69	5.30	4.90	5.74	5.24	4.74	5.56	5.04	4.60
10-Year Treasury Note	4.27	6.44	5.92	5.38	6.82	6.21	5.62	6.76	6.13	5.57
AA Utility Bond Rate	6.04	7.91	7.55	7.17	8.79	8.15	7.54	9.20	8.52	7.91
Value of Shipments (billion 2000 dollars)										
Total Industrial	5643	6015	6355	6704	6936	7778	8636	7989	9578	11201
Non-manufacturing	1439	1437	1572	1710	1579	1808	2040	1746	2069	2392
Manufacturing	4204	4578	4783	4994	5357	5969	6596	6243	7509	8809
Energy-Intensive	1161	1226	1265	1310	1335	1441	1550	1436	1627	1819
Non-Energy Intensive	3044	3352	3518	3684	4022	4528	5046	4807	5882	6990
Population and Employment (millions)										
Population with Armed Forces Overseas	294.1	307.6	310.1	312.6	322.7	337.0	351.2	334.1	364.8	395.5
Population (aged 16 and over)	229.1	241.7	244.1	246.5	256.0	265.3	274.6	268.5	288.5	308.5
Population, over age 65	36.4	40.2	40.4	40.6	53.9	54.9	55.8	69.1	71.6	74.1
Employment, Nonfarm	131.4	135.2	142.1	148.9	145.3	156.2	167.1	157.3	173.6	189.8
Employment, Manufacturing	14.3	13.6	14.0	14.3	12.8	13.3	13.7	11.9	12.6	13.2
Key Labor Indicators										
Labor Force (millions)	147.4	156.7	158.9	161.7	161.5	167.7	174.4	171.3	180.8	190.7
Non-farm Labor Productivity (1992=1.00)	1.34	1.50	1.52	1.55	1.80	1.93	2.06	2.15	2.42	2.68
Unemployment Rate (percent)	5.53	4.70	4.69	4.67	4.46	4.37	4.27	4.98	4.90	4.83
Key Indicators for Energy Demand										
Real Disposable Personal Income	8004	9325	9622	9926	12205	13057	13923	15703	17562	19450
Housing Starts (millions)	2.08	1.64	1.97	2.30	1.45	1.89	2.34	1.21	1.82	2.43
Commercial Floorspace (billion square feet) ...	75.0	81.7	82.3	83.0	91.5	96.0	100.4	101.2	112.0	123.0
Unit Sales of Light-Duty Vehicles (millions) ...	16.87	17.02	17.61	18.50	17.40	18.90	20.55	19.15	21.75	24.70

GDP = Gross domestic product.

Btu = British thermal unit.

Sources: 2004: Global Insight macroeconomic model CTL0805, and Global Insight industry model, July 2005. **Projections:** Energy Information Administration, AEO2006 National Energy Modeling System runs LM2006.D113005A, AEO2006.D111905A, and HM2006.D112505B.